REMARKS

I. Introduction

In response to the Office Action dated July 18, 2007, claims 1, 5, 6, 7, 9, 17, 21, 22, 23, and 25 have been amended. Claims 1-32 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. Claim Amendments

Applicant's attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for patentability or to distinguish the claims over the prior art.

III. Prior Art Rejections

On page (2) of the Office Action, claims 1-3, 5-10, 13-19, 21-26, and 29-32 were rejected under 35 U.S.C. §102(e) as being anticipated by Gauthier et al., U.S. Publication No. 20040012594 (Gauthier). On page (5) of the Office Action, claims 4 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gauthier and in view of Haga et al., U.S. Publication No. 20010040575 (Haga). On page (6) of the Office Action, claims 11, 12, 27, and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gauthier.

Specifically, the independent claims were rejected as follows:

> Claim 1. Gauthier teaches a method for manipulating an image transformation over time, comprising (i.e. noted in [0002], generating of animation data for animating a character): Gauthier teaches selecting a source image from a first frame of a video clip (i.e. noted in [0074] and shown in fig. 7 frame 1 is selected); Gauthier teaches determining a first animation axis that defines a first two-dimensional transformation of the source image in the video clip over time (i.e. noted from frames 1-5, also in [0080], number of frames per unit of time); Gauthier teaches selecting a destination image (i.e. noted in figs. 7-8 as the destination image "walk", "run", an "jump" are selected), that the source image will transform into, from a second frame of the video clip (i.e. noted in figs. 7-8 the "walk" mode starts from the second frame); Gauthier teaches determining a second animation axis that defines a second two-dimensional transformation (i.e. nored in fig. 7 the first animation in the second frame is the walking mode, and the second animation in the third frame is shown a different animation, e.g., jumping that is considered as the transformation in a vertical axis) of the destination image in the video clip over time (i.e. noted in fig. 8); Gauthier teaches manipulating a transformation of the source image (i.e. noted in [0125], steps 1503 and 1504 provide a transformation angle and axis) to the destination image by manipulating the second axis (i.e. noted in [0124]).
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> Claims 13-16 are rejected with similar reason as set forth in claim 1, above.
>
> Claim 17 is rejected with similar reason as set forth in claim 1, above.

Claims 29-31 are rejected with similar reason as set forth in claim 1, above.

Claim 11. Gauthier teaches (see the rejection of claim 1 for cited claimed features, except the underlined terminologies) a method for manipulating an image transformation over time, comprising: (a) selecting a source image from a first frame of a video clip; (b) selecting a destination image, that the source image will transform into, from a second frame of the video clip;

Gauthier does not explicitly specify the underlined terminologies of the following claim features: (c) accepting input from a user for adjusting a coarseness of a lattice structure, wherein: (i) the coarseness of the lattice structure controls an accuracy for performing a transformation from the source image to the destination image; and (ii) the coarseness of the lattice structure determines how sample points on the source image and the destination image are manipulated with respect to each other during the transformation; and (d) performing the transformation of the source image to the destination image in accordance with the coarseness of the lattice structure.

Examiner's interpretations: the coarseness of the lattice structure interpreted as correcting the position of nodes, which collectively define a structural model. Now according to the examiner's interpretation Gauthier in fig. 6 shows a biomechanical model that structured with number of lattices e.g., 605, 607, and in fig. 10 step1006 as a prior art adjust the position of the lattice structure, and in fig. 15 in step 1506 drives the coarseness of the lattice structure.

Obviously, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute applicant's "coarseness of the lattice structure", with "correcting the position of nodes" that described in the prior art reference, in order to generate animation data for animating a character, wherein the blending of a first motion clip into a second motion clip is inexpensively performed in real-time in reply to animator input, whilst maintaining a high degree of positional accuracy to avoid generating artifacts in the character's motions.

Examiner's note: Technical terminology evolves due to the need for experts in a field to communicate with precision and brevity, but often has the (usually) undesired effect of excluding those who are unfamiliar with the particular specialized language of the group. This can cause difficulties to communicate. Examiner believes there is no need modifying the prior arts to meet the claimed invention, just using different technical terminology.

Claim 27 is rejected with similar reason as set forth in claim 11, above.

Independent Claims 1 and 17

Applicant traverses the above rejections for one or more of the following reasons:

(1) Neither Gauthier nor Haga teach, disclose or suggest a source spline or a destination spline that each consist of smooth curves that run through a series of given points;

(2) Neither Gauthier nor Haga teach, disclose or suggest an image metamorphosis; and

(3) Neither Gauthier nor Haga teach, disclose or suggest an axis that defines a 2D metamorphosis of all the points within a spline to which the axis is associated.

Independent claims 1 17 are generally directed to manipulating an image metamorphosis over time. More specifically, portions of a source image and destination image are each selected. To select the source and destination image, a spline is created that consists of a smooth curve that runs through a series of given points. Animation axis are then determined that define a metamorphosis

of all of the points within the spline over time. The invention then enables the user to manipulate the metamorphosis. To manipulate/change the metamorphosis (i.e., defined by the animation axis), rather than modifying the splines themselves, the user merely manipulates one of the axis.

In rejecting these claims, the Office Action relies exclusively on Gautheir under a lack of novelty standard. Applicants first note that Gauthier completely fails to teach, disclose, or suggest a spline consisting of a smooth curve through a series of give points. In rejecting the selection of the source image, the Action relies on Gauthier's frame 1 in fig. 7. Applicants note that sequence 411 from which frame 1 is selected is merely a generic motion clip of a biomechanical model that represents a particular motion (see [0056]). For the defining of the animation axis, the Action relies on frames 1-5 of item 411. However, as noted above, such frames are not selected by the user and merely consist of a series of motions that occur during a motion clip (see [0056]). Further, the claims separately identify both the animation axis and the source image. The action is equating both the animation axis and the source image with the same frames. Such an assertion is without merit and in direct contradiction to the present and prior claims. In addition, as amended, Gauthier's frames completely fail to define a spline that consists of a smooth curve through a series of points.

For the destination image, the Action relies again on the different motions and the selection of one of the "motions". Such an assertion is without merit. In this regard, none of the motions consist of a spline consisting of a smooth curve through a series of points. Instead, as stated above, such motions are merely generic motion clips of a biomechanical model.

Further, with respect to the second animation axis, the Action merely relies on the second frame of FIG. 7 and states that the walk mode starts from the second frame. Not only is such an assertion contrary to that stated in the claims, but it is a misinterpretation of Gauthier. All of the frames 1-5 in Gautheir consists of the walking motion. An entirely different generic sequence would be selected for a different motion. Gauthier's walk motion starts in frame 1 and concludes in frame 5 and does not start in frame 2. Further, contrary to that asserted in the Action, the second animation in third frame is not a different animation such as a jump. Instead, as clearly stated in Gauthier, each of the frames is associated with a single motion (see paragraph [0075]-[0076]).

With respect to claimed step of manipulating the metamorphosis by manipulating the axis, the Action merely relies on a transformation angle and axis. However, such a teaching does not allude to a user being able to manipulate a transformation or metamorphosis whatsoever (as

claimed). Further, there is no capability in Guathier for the user to manipulate the generic motion clips merely my modifying a single axis as claimed.

Again, the present invention enables the ability to easily modify an entire metamorphosis merely by a user manipulating an axis that defines an animation over time. Such a capability is wholly and completely lacking in Gauthcir or the other cited art. Instead, Gauthier is directed at using a generic set of motions and applying such motions to an image - a completely different concept and implementation.

The dependent claims provide further differences. For example, claim 2 is directed towards a schematic hierarchical representation of the axis having connectors to nodes. No such hierarchical representation with nodes and connectors is even remotely alluded to in Gauthier. Instead, the Action relies on an abstract reference that states a hierarchy exists. The mere existence of a hierarchy between parent and children nodes does not and cannot teach or suggest an actual display of a schematic hierarchical representation wherein connects connect a source image to an axis as claimed.

Further, the ability to superimpose a graphical representation of an axis over a destination image is not even remotely hinted at in Gauthier.

Lastly, claim 10 provides for the user realigning a second axis with a source image (thereby manipulating the metamorphosis). Such a realignment cannot be taught by manually adjusting a particular pivot point of an image. In this regard, such a pivot point is not the claimed axis and cannot and does not teach the claimed invention.

In view of the above, Applicants respectfully request withdrawal of the rejection.

Independent Claims 11 and 27

Applicant traverses the above rejections for one or more of the following reasons:

(1) Neither Gauthier nor Haga teach, disclose or suggest a lattice structure that controls an accuracy for performing a transformation from a source image to a destination image; and

(2) Neither Gauthier nor Haga teach, disclose or suggest a lattice structure that determines how sample points on a source image and destination image are manipulated with respect to each other during the transformation.

Independent claims 11 and 27 are generally directed to manipulating an image transformation over time. More specifically, a lattice structure have a particular coarseness is defined. The user adjusts this coarseness. Further, the coarseness of the lattice structure provides for two properties: (1) it controls an accuracy for performing a transformation for a source to a destination; and (2) it determines how sample points on a source and destination are manipulated with respect to each other.

In rejecting these independent claims, the Action acknowledges that Gauthier fails to teach the coarseness of the lattice structure. Instead, the Examiner interpreted the coarseness of a lattice structure as correcting the position of nodes that collectively define a structural model. Applicants respectfully disagree with and traverse such an assertion. Firstly, the term "lattice" is well defined in the specification and is understood in the art as being similar to a grid or mesh (see paragraph [0051] on page 15). The Office Action is merely ignoring the term "lattice" and equating it with a completely different meaning as that of a series of nodes that define a structure model. The action continues and refers to Gauthier FIG. 6 with various nodes 605, 607 referring to them as a number of lattices. Again, such an equivalency is not even remotely plausible - two nodes 605 and 607 that represent a hip and an ankle in a biomechanical model are not even remotely similar to a lattice, mesh, or grid as claimed.

In addition, the claims provide that the coarseness of the lattice structure controls the accuracy for performing a transformation. With respect to the coarseness, the Action equates coarseness with the ability to adjust the position of these 2 nodes. The specification refers to coarseness as the "level of refinement of the grid" (see paragraph [0051]). Further, the term "coarseness" has a common dictionary meaning of "composed of relatively large parts or particles, lacking in fineness or delicacy of texture, structure, etc., harsh; grating..." To refer to the position of two (2) nodes as a coarseness as claimed is wholly without merit. Without even mentioning a lattice, grid, or mesh, or a coarseness of such a structure, Gauthier cannot possibly describe or suggest the ability to adjust the coarseness of such a lattice nor that such a coarseness controls the accuracy for performing a transformation.

Further, the claims expressly provide that the coarseness determines how sample points are manipulated with respect to each other during a transformation. The position of Gauthier's two (2) nodes cannot and does not teach, disclose, suggest, or allude to, explicitly or implicitly, that such

position determines how sample points are manipulated with respect to each other. In fact, there is no mention of such sample points in Gauthier nor how such sample points are manipulated with respect to each other.

In view of the above, Applicants submit that claims 11 and 27 are patentable over the cited art.

Independent Claims 13 and 29

Applicant traverses the above rejections for one or more of the following reasons:

(1) Neither Gauthier nor Haga teach, disclose or suggest mapping a sample point from a source image to a destination image; and

(2) Neither Gauthier nor Haga teach, disclose or suggest manipulating a transformation merely be manipulating a mapping between the source and destination.

Independent claims 13 and 29 are generally directed to manipulating an image transformation over time. More specifically, these independent claims are directed towards using a mapping between sample points to manipulate a transformation. In this regard, a mapping of a first point from a source image to a second point on a destination image is made. Thereafter, to manipulate a transformation, the mapping is merely manipulated. In rejecting these claims, the Office Action merely refers to the rejection of claims 1. However, claim 1 does not refer to a mapping or the manipulation of such a mapping. Again, these claims are explicitly directed towards the mapping between sample points in a source and destination image. By changing this mapping, the user can change how the image transforms.

Instead of teaching such a mapping manipulation, Gauthier merely provides for matching a predefined sequence of animations to a character in an image (i.e., to a source image). However, there is no capability in Guatheir to choose a specific sample point in a source image nor is there any selection of a destination image. Instead, the predefined sequence of animations are generic movements that the user intends to apply to the character. Thus, Gauthier does not permit the user to select a destination image with which to perform a transformation. Further, there is no capability to select a particular sample point in such a destination image. Further, yet, Guathier completely fails to remotely allude to the ability to manipulate the transformation between these two points

merely by manipulating the mapping. Instead, Gauthier does not provide the ability to change any mapping between sample points in two images whatsoever.

Further, the Office Action ignores the mapping limitations and the differences between independent claim 1 and 13. Under MPEP §2142 and 2143.03 "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." The Action fails to address all of the limitations. Accordingly, the Action has failed to establish a prima facie case of unpatentability.

In view of the above, Applicants respectfully request withdrawal of the rejections of claims 13 and 29 (and the dependent claims that depend therefrom).

IV. Conclusion

In addition to the above, Applicants submit that the various elements of Applicant's claimed invention together provide operational advantages over Gauthier and Haga. In addition, Applicant's invention solves problems not recognized by Gauthier and Haga.

Thus, Applicant submits that independent claims 1, 11, 13, 17, 27, and 29 are allowable over Gauthier and Haga. Further, dependent claims 2-10, 12, 14-16, 18-26, 28, and 30-32 are submitted to be allowable over Gauthier and Haga in the same manner, because they are dependent on independent claims 1, 11, 13, 17, 27, and 29, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-10, 12, 14-16, 18-26, 28, and 30-32 recite additional novel elements not shown by Gauthier and Haga.

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

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